

**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK**

REALTIME DATA, LLC D/B/A/ IXO,	§	
	§	
Plaintiff,	§	
	§	No. 11 Civ. 6696 (KBF)
v.	§	No. 11 Civ. 6701 (KBF)
	§	No. 11 Civ. 6704 (KBF)
MORGAN STANLEY, ET AL.,	§	
	§	
Defendants.	§	ECF Case

X

REALTIME DATA, LLC D/B/A/ IXO,	§	
	§	
Plaintiff,	§	
	§	No. 11 Civ. 6697 (KBF)
v.	§	No. 11 Civ. 6699 (KBF)
	§	No. 11 Civ. 6702 (KBF)
CME GROUP INC., ET AL.,	§	
	§	
Defendants.	§	ECF Case

X

REALTIME DATA, LLC D/B/A/ IXO,	§	
	§	
Plaintiff,	§	
	§	No. 11 Civ. 6698 (KBF)
v.	§	No. 11 Civ. 6700 (KBF)
	§	No. 11 Civ. 6703 (KBF)
THOMSON REUTERS, ET AL.,	§	
	§	
Defendants.	§	ECF Case

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Pursuant to the Court's February 15, 2012 Scheduling Order, Plaintiff Realtime Data, LLC d/b/a/ IXO Research and Development ("Realtime") respectfully submits its Responsive Claim Construction Brief regarding U.S. Patent No. 7,417,568 (the "'568 patent"), U.S. Patent No. 7,777,651 (the "'651 patent"), and U.S. Patent No. 7,714,747 (the "'747 patent") (collectively, the "patents-in-suit").

I. INTRODUCTION

Defendants' strategy for pressing its proposed claim constructions suffers from four flaws — two of which are commonly asserted by accused infringers and commonly rejected under Federal Circuit precedent, and two of which arise from the inaccurate or irrelevant recital of events and facts related to this litigation.

As to the first two flaws, Defendants improperly attempt to identify an alleged main point, objective, or "gist" of Realtime's inventions before even addressing the claims. The Federal Circuit has rejected any approach to claim construction that does not begin with the claim language, and has specifically rejected any approach that relies on identifying some perceived gist or heart of a patented invention. That authority is cited *infra*.

Defendants next attempt to import limitations from preferred and alterative embodiments of the claimed inventions described in the patent specifications. Federal Circuit authority forbids such interpretation of patent claims. Defendants' attempts to do so here are particularly egregious because they incorrectly allege that the patents do not describe certain embodiments when those embodiments are in fact described. And the limitations Defendants attempt to include in their proposed constructions are expressly recited in other, *unasserted* claims of related patents but not in the *asserted* claims in this litigation. *See infra*.

As to the last two flaws, Defendants misconstrue and misapply certain actions and statements in the reexamination proceedings of the asserted patents — which Defendant CME initiated as a litigation tactic — to allege that Realtime has somehow taken inconsistent positions. But that attempt fails for three straightforward and compelling reasons. First, none of the arguments to which Defendants point are directed to the *asserted* claims in this case. The Examiner never rejected the asserted claims and she confirmed the validity of the asserted claims without amendment or argument by Realtime. Second, the arguments to which Defendants point were expressly retracted by Realtime, and Realtime expressly accepted the Examiner's constructions of those claims. Thus, the public record shows that the claim constructions applied in the reexamination proceedings are consistent with Realtime's proposed claim constructions here. Third, no estoppel applies to arguments Realtime made in the reexamination proceedings because those arguments were not successful in securing the allowance of any claims (and were expressly retracted). Moreover, those arguments were made after Defendants had already been accused of infringing the asserted claims — so there can be no argument that Defendants detrimentally relied on those arguments — and were retracted before the parties began the claim construction process. Thus, Realtime did not retract those arguments to secure any strategic advantage regarding claim construction. Rather, Realtime retracted those arguments in response to a then recently-issued Federal Circuit decision that could potentially have triggered intervening rights and thereby limited the available damages or infringement as to the confirmed and unamended claims asserted in this case. *See infra*.

Finally, certain of Defendants' proposed claim constructions attempt to include limitations clearly directed to their non-infringement arguments. But the claim language does

not recite or require those litigation-driven constructions, and it is improper to construe claims based on how the accused products and methods operate.

Each of these flaws in Defendants' arguments are exposed in detail below, and when exposed show why Defendants' proposed claim constructions should be rejected.

II. ARGUMENT

A. The Encoder Selection Terms

Claim Terms	Defendants' Construction	Realtime's Construction
"selecting an encoder" "the lossless encoders are selected" "selecting one or more lossless encoders" "select one or more lossless encoders" ('568/1; '747/14; '651/1, 13, 22, 29, 43, 60, 91, 108, 115)	choosing (or choose) an encoder (or lossless encoders) during the compression process based on analyses of content of the data block (or data field)	choosing hardware or software that performs data compression the techniques, hardware or software that provide an exact representation of the original uncompressed data are chosen choosing one or more techniques, hardware or software that provide an exact representation of the original uncompressed data choose one or more techniques, hardware or software that provide an exact representation of the original uncompressed data

Defendants' proposed construction unnecessarily and illogically repeats language already in the respective asserted claims and, furthermore, manufactures a temporal limitation with no basis in the plain language of the claims, the patent specifications, or the prosecution histories. Defendants' erroneous construction stems from several fundamental flaws.

As with their overall characterizations of the patents-in-suit, Defendants attempt to present a "point," "objective" or gist of Realtime's inventions and then try to convince the Court that the encoder selection terms should be constricted to their irrelevant — and wrong — general ideas about the patents-in-suit. For example, Defendants state that "[t]he whole point of

Realtime’s purported invention is to select an appropriate encoder on-the-fly after making a direct analysis of the data to be compressed.” (Def. Opening Br. at 10.) Defendants’ attempt to construe Realtime’s patented inventions by collapsing those inventions into a misconstrued “point” or “gist” of the invention is wrong. The patents-in-suit do not temporally limit the “selecting an encoder” process. Indeed, Defendants’ “on-the-fly” phrasing appears nowhere in the patents-in-suit.

Moreover, the Federal Circuit has repeatedly stated that it is improper to limit patent claims to perceived objectives, goals or a perceived gist of an invention. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1327 (Fed. Cir. 2005) (“We have held that the fact that a patent asserts that an invention achieves several objectives does not require that each of the claims be construed as limited to structures that are capable of achieving all of the objectives.”) (internal quotations and citations omitted); *Cooper Cameron Corp. v. Kvaerner Oilfield Prods.*, 291 F.3d 1317, 1323 (Fed. Cir. 2002) (stating that there is no “‘essential element’ test mandating an inquiry into what an inventor considers to be essential to his invention and requiring that the claims incorporate those elements”). Thus, Defendants’ professed gist of Realtime’s inventions — which is not even in accord with the express disclosures of the patents-in-suit — is immaterial to claim construction.

When Defendants finally turn their attention to the language of the relevant claims, they first incorrectly lump together all of the claims, stating that “the selecting is based on an analysis of the data being compressed.” (Def. Opening Br. at 11.) While some claims recite “wherein the lossless encoders are selected based on analyses of the content of the data fields” (*see, e.g.*, ‘651 patent claims 1, 108), others require “selecting one or more lossless encoders based on the data block type and a computer file” (*see, e.g.*, ‘747 patent claim 14; ‘651 patent claim 29). Second,

Defendants state that this (incorrectly cited) claim language supports their argument that “[t]he claims are clear that the selection must occur during the compression process.” (Def. Opening Br. at 11.) Notwithstanding Defendants conclusory arguments, the plain language of the claims controls, and nowhere in the claims is there a requirement that the selection be accomplished “during the compression process,” let alone any recital of such language.

Next, in analyzing the specifications of the patents-in-suit, Defendants again improperly latch on to “[o]ne of the stated objectives of the invention.” (Def. Opening Br. at 11.) Compounding this error, Defendants then rely on preferred embodiments, which they argue accomplish this “objective,” and in turn wrongfully use those embodiments to support the injection of their “during the compression” temporal limitation into the claims. (Def. Opening Br. at 12.) *See Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1325 (Fed. Cir. 2008) (“An invention may possess a number of advantages or purposes, and there is no requirement that every claim directed to that invention be limited to encompass all of them.”) (internal quotations and citations omitted); *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1366 (Fed. Cir. 2012) (“It is . . . not enough that the only embodiments, or all of the embodiments, contain a particular limitation. We do not read limitations from the specification into claims; we do not redefine words. Only the patentee can do that.”).

While relying on ill-conceived and irrelevant objectives of the inventions, Defendants ignore explicitly disclosed alternative embodiments of the claimed inventions where the system creates a file that *associates* encoders with particular data fields before a stream of data is received. (‘651 patent col. 22 ln. 39 - col. 23 ln. 33.) (Shamos Responsive Decl. ¶ 10.) The embodiments disclosed in this portion of the specification teach the pre-association of specific encoders to specific data fields in a pre-assembled (*i.e.*, before compression) table of specific

message types ('651 patent col. 22 ln. 52 - 59), and application of those encoders in an “ordered vectored set” (*i.e.*, in sequence) (*id.* col. 23 ln. 8 - 25). (Shamos Responsive Decl. ¶ 10.) Thus, contrary to Defendants’ arguments, the patents disclose an embodiment where the selection or choosing of an appropriate encoder is pre-associated with each data field and maintained in a separate file that is called and applied by the compression or decompression algorithm when needed, and in the pre-defined order that the data fields and associated encoders appear in that computer file. Realtime’s construction, “choosing hardware or software that performs data compression,” is broad enough to encompass this disclosed embodiment, while Defendants’ proposed construction aims to preclude it, but seeks such preclusion without establishing how the *claim language* itself places that explicitly disclosed embodiment of the invention outside the scope of the claims as written. *See Adams Respiratory Therapeutics, Inc. v. Perrigo Co.*, 616 F.3d 1283, 1290 (Fed. Cir. 2010) (“A claim construction that excludes the preferred embodiment ‘is rarely, if ever, correct and would require highly persuasive evidentiary support.’”) (quoting *Vitronics Corp. v. Conceptronic Inc.*, 90 F.3d 1576, 1583-84 (Fed. Cir. 1996)).

Defendants’ reliance on statements made by Realtime during reexamination of the ‘568 patent and ‘651 patent are also unavailing. Realtime has *never* limited the scope of the asserted patent claims by any argument or amendment made in reexamination proceedings at the PTO, let alone successfully done so such that estoppel would apply. Disavowal of claim scope only applies if the party to be estopped successfully obtained confirmation of the validity of the patent claim in reexamination after making its argument. *See Abbott Labs. v. Church & Dwight Co.*, No. 07-C-3428, 2008 U.S. Dist. LEXIS 103635, at *25 (N.D. Ill. Dec. 22, 2008) (finding that the patentee’s statements made in reexamination proceedings did not result in prosecution disclaimer because they were unsuccessful, and noting “that the doctrine of prosecution disclaimer is

arguably analogous to the concept of judicial estoppel, which applies only if the party to be estopped was successful in the prior proceeding”) (citing *Lava Trading, Inc. v. Sonic Trading Mgmt., LLC*, 445 F.3d 1348, 1353 (Fed. Cir. 2006)).

The cases relied upon by Defendants are readily distinguishable. In *Illinois Computer Research LLC v. HarperCollins Publishers, Inc.*, No. 10-Civ-9124, 2012 U.S. Dist. LEXIS 6263 (S.D.N.Y. Jan. 19, 2012), this Court held that a patentee was bound by prior arguments it advanced in another litigation in *successfully* opposing a motion for summary judgment. This Court also determined that the patentee was bound by prior arguments it made during patent prosecution to overcome prior art rejections of ultimately allowed claims. And in *Krippelz v. Ford Motor Co.*, 667 F.3d 1261, 1266-67 (Fed. Cir. 2012), the Court found disclaimer where the patentee’s statements during reexamination and appeal to the Board of Patent Appeals and Interferences *successfully* resulted in claim allowance. Here, however, all of the arguments that Realtime made in the reexamination proceedings of the ‘568 patent and the ‘651 patent were unsuccessful, and in any event were expressly withdrawn by Realtime even before the reexamination Examiner found them unconvincing. Thus, Realtime did not succeed in convincing the PTO to adopt its constructions and no estoppel applies.

In addition, Realtime has expressly retracted all of its arguments made during reexamination (including those cited by Defendants) that sought to overcome rejections made against those non-asserted claims. Moreover, those arguments were made after Defendants had already been accused of infringing the asserted claims (so there can be no argument that Defendants detrimentally relied on those arguments), and were retracted before the parties began the claim construction process. Realtime retracted those arguments *not* to gain some strategic advantage or escape an adverse claim construction, but rather because Realtime’s interpretations

differed from the Examiner's and because of a then-recently issued decision by the Federal Circuit regarding the potential triggering of then-intervening rights that might affect the available damages period. In retracting its arguments, Realtime expressly stated in the public record of the reexamination proceedings:

Patent Owner, as set forth in detail below, is retracting arguments made in its September 26, 2011 Reply to the first Non-Final Office Action dated July 25, 2011 to rebut the Examiner's rejection of claims, which rejections were based on the Examiner's broadest reasonable interpretation of specific claim terms. Such retraction of Patent Owner's rebuttal arguments regarding the Examiner's interpretation of specific claim terms, as discussed below, will remove any challenge to the claims rejected by the Examiner based on such claim interpretations.

Patent Owner hereby retracts its rebuttal arguments to the Examiner's rejections, because such rebuttal arguments were based on the Patent Owner's interpretations of the specific claim terms that differed from the Examiner's interpretations. Patent Owner hereby retracts such claim interpretation rebuttal arguments because of a recently-issued decision of the Court of Appeals for the Federal Circuit in the matter of *Marine Polymer Tech., Inc. v. HemCon, Inc.*, 659 F.3d 1084 (Fed. Cir. 2011). The Federal Circuit has recently granted *en banc* review of the Marine Polymer decision and vacated the decision of the original panel. Notwithstanding that *en banc* review and vacature of the panel decision, Realtime hereby retracts its arguments made in its prior response as to the rejected claims (as explained in more detail below) to avoid any risk that such arguments might be argued or found to trigger any intervening rights as to the confirmed claims, and to accelerate prosecution of this reexamination.

(Ex. 1, '651 Patent Reexamination, Patent Owner's Reply to January 27, 2012 Office Action at 2-4; Ex 2, '568 Patent Reexamination, Patent Owner's Reply to December 9, 2011 Action Closing Prosecution at 10-13.) There is therefore clear public notice that the prior statements and arguments cited by Defendants are not admissions and did not limit the scope of Realtime's claimed inventions. *See, e.g., Biogen, Inc. v. Berlex Labs, Inc.*, 318 F.3d 1132, 1141 (Fed. Cir. 2003) (finding no estoppel where patentee clearly retracted prior erroneous arguments);

Halliburton v. Weatherford Int'l, Inc., No. 3:07-CV-2144, 2010 U.S. Dist. LEXIS 97674, at *30 (N.D. Tex. July 8, 2010) (finding no disavowal or estoppel based on reexamination statement where statement did not have “any impact on the reexamination” and patentee made “other clarifying statements in reexamination”). If anything, by retracting its arguments and accepting the claim constructions applied by the reexamination Examiner to reject certain claims (which claims are not at issue in this litigation), the public record as it stands shows that the claim constructions applied by the Examiner and proffered by Realtime in this litigation are correct, appropriate, and consistent with the intrinsic record.

Furthermore, none of the reexamination statements cited by Defendants adds anything to the plain language of the claims or contradicts Realtime’s proposed constructions. As Defendants themselves contend, “the claims make clear that the ‘selection’ of an encoder must be based on an analysis of the content of the data to be compressed.” (Def. Opening Br. at 10.) Thus, there is little or no probative value to — as Defendants argue — Realtime “[h]aving explicitly and repeatedly argued to the PTO that ‘selecting’ is based on ‘analysis.’” (*Id.* at 12.) Realtime agrees that, as the claims require, the selection or choosing of an encoder *is* based on analysis of the content of the data block (or data field).

There is also little or no probative value to Defendants’ argument that “Claim 1 of the ‘568 patent also recites ‘selecting an encoder with the recognized data field type,’ and Realtime has admitted that this ‘recognize[ing]’ [sic] is achieved through an analysis of the data.” (*Id.* at 11.) Defendants’ supposed support for that argument is that, during reexamination, Realtime stated that “in order to make the determination of whether a data type is recognized, the data in the data block must first be analyzed.” (*Id.* at 11 n.2 (quoting Def. Ex. 7 at 15).) However, that statement did not pertain to the “selecting” step of claim 1 of the ‘568 patent, but rather the

“recognizing” step, which is a separate step that precedes “selecting.” (‘568 patent claim 1 (“the method comprising: recognizing a data field type . . . ; selecting an encoder associated with the recognized data field type”).) Realtime made no such statement concerning how or when “selecting an encoder” occurs. (*See* Shamos Responsive Decl. ¶ 13.)

Contrary to Defendants’ arguments, Realtime is not urging an opposite construction in this litigation. Realtime’s construction does not include the phrase “based on analyses of content of the data blocks,” because that phrase is inconsistent with language appearing in a number of the relevant claims and improperly parrots language already explicitly recited in other claims. Indeed, Defendants’ injection of the phrase “based on analyses of content of the data blocks (or data fields)” results in repetitive, confusing, and nonsensical readings of the claims when their proposed construction is substituted for the relevant claim term. For example, substituting Defendants’ proposed construction into claim 1 of the ‘651 patent leads to the following: “wherein [choosing lossless encoders during the compression process based on analyses of content of the data fields] based on analyses of content of the data fields.” (‘651 patent col. 23 ln. 58-59.) Substituting Defendants’ proposed construction into claim 13 of the ‘651 patent also results in a nonsensical reading of the claim that will only confuse the jury: “[choose lossless encoders during the compression process based on analyses of content of the data blocks] for the data block based on the data block type and a computer file.” (‘651 patent col. 25 ln. 1-2.)

Moreover, importing the temporal limitation “during the compression” into Realtime’s decoding system and method claims (‘651 patent claims 1, 91, 108, and 115) is illogical as there are no compression steps or processes in those claims. In fact, none of those claims include the term “compression process,” and, therefore, there is no antecedent basis for “the compression process” in Defendants’ proposed construction. (*See* Shamos Responsive Decl. ¶¶ 9, 12.) Thus,

for this additional reason, “during the compression” should not be read into the encoder selection terms.

Realtime’s construction logically substitutes for the encoder selection terms without repeating and confusing the remaining claim language and is consistent with the broad disclosure in the patents specifications as understood by a person of ordinary skill in the art, and is fully consistent with the intrinsic evidence in the public record — *i.e.*, the original examination and the reexamination proceedings. Accordingly, the Court should reject Defendants’ proposed construction and adopt Realtime’s definition.

B. Data Stream

Claim Terms	Defendants’ Construction	Realtime’s Construction
“data stream” and “stream of data” (‘568/1; 20; ‘747/1, 7, 8, 13, 14, 19; ‘651/1, 4, 12, 13, 16, 21, 22, 24, 29, 43, 46, 51, 60, 61, 72, 91, 92, 94, 108, 111, 115, 117, 123	one or more data blocks transmitted in sequence from an external source whose characteristics are not controlled by the data encoder or decoder	one or more data blocks transmitted in sequence

While the parties agree that “data stream” means “one or more data blocks transmitted in sequence,” Defendants contend that the term is further limited by additional information about the “source” of the stream. Again Defendants rely on irrelevant reexamination proceedings regarding claims that are not being asserted here, failing to acknowledge, or inform the Court, that none of the claims that are being asserted in this litigation were ever rejected by the PTO during the reexamination proceedings.

Likewise, Defendants neglect the fact that, notwithstanding statements and arguments made by Realtime during reexamination — which have been expressly retracted from the reexamination record — the PTO has maintained its rejections. (*See* Ex. 2, ‘568 Patent

Reexamination, Patent Owner's Reply to December 9, 2011 Action Closing Prosecution at 10-13; Ex. 3, U.S. Patent No. 7,161,506 Reexamination, Patent Owner's Rebuttal Brief Under 37 C.F.R. § 41.71 Retracting the Arguments Made to Overcome the Claim Rejections and Thereby Eliminating the Issues on Appeal at 6-9.) In other words, the PTO has not accepted Realtime's positions and it continues to apply a broad interpretation of the term "data stream." Therefore, the public is not only on notice that Realtime's statements were rejected and expressly retracted, but also that regardless of those statements, the term "data stream" has the broad interpretation applied by the PTO. *See Abbott Labs. v. Church & Dwight Co.*, No. 07-C-3428, 2008 U.S. Dist. LEXIS 103635, at *24 (N.D. Ill. Dec. 22, 2008) ("Indeed, when the PTO expressly rejects an applicant's proposed construction, the idea of public notice cuts in the opposite direction . . . as the public presumably is aware that despite an applicant's statements to the contrary, the patent claim in question has a different construction.").

None of the cases cited by Defendants are relevant here, because in all of those cases, the patentee's statements (which had not been retracted) pertained to asserted claims that were *allowed* by the PTO, not claims that were rejected. *See Am. Piledriving Equip., Inc. v. Geoquip, Inc.*, 637 F.3d 1324 (Fed. Cir. 2011); *Seachange Int'l, Inc. v. C-COR Inc.*, 413 F.3d 1361 (Fed. Cir. 2005); *Krippelz v. Ford Motor Co.*, 667 F.3d 1261, 1266-67 (Fed. Cir. 2012). Accordingly, contrary to Defendants' arguments, no estoppel can attach to any statements regarding "data stream" made by Realtime during reexamination. Moreover, none of the reexamination statements relied upon by Defendants contradicts Realtime's proposed construction, or supports Defendants' proposed construction. (Shamos Responsive Decl. ¶ 19.)

Once Defendants' reliance on irrelevant reexamination proceedings is properly stripped away, Defendants provide no basis in the patent specifications, let alone in the claim language —

because none exists — for incorporating the additional limitation “from an external source whose characteristics are not controlled by the data encoder.” In addition, there is no reason for this Court to depart from the *Packeteer* Court’s construction of “data stream.” The Eastern District of Texas reached its construction for this term through a comprehensive and reasoned analysis of related patents and corresponding intrinsic evidence. *See Astrazeneca AB v. Mylan Labs., Inc.*, 490 F. Supp. 2d 381, 419 (S.D.N.Y. 2007) (“The Court may consider and rely on prior claim construction in subsequent actions.”) (citing *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334 (Fed. Cir. 1999)); *Nextec Applications v. Brookwood Cos.*, 703 F. Supp. 2d 390, 408 (S.D.N.Y. 2010) (“[C]laim terms appearing in related patents should generally be construed consistently across related patents.”). Moreover, Realtime’s construction conforms to the term “data stream” as understood by one of ordinary skill in the art (Shamos Responsive Decl. ¶ 17) in light of the inventors’ broad usage of that term in the patents, for example:

- “It is to be appreciated that *the present invention is applicable with any data stream* whose statistical regularity may be captured and represented in a state machine model. For example, the present invention applies to *packetized data streams*, in which the packets are limited in type format and content.” (‘651 patent col. 10 ln. 28-31 (emphasis added).)
- “As noted above, it has been determined that the statistical *compression schemes described herein are well adapted for use with structured data streams* having repetitive data content (e.g., stock symbols and quotes, etc.) to provide fast and efficient data compression/decompression.” (*Id.* col. 11 ln. 45-50 (emphasis added).)
- “*A data stream comprising one or more data blocks* is input into the data compression system and the first data block in the stream is received (step 300) [Fig. 2]. As stated

above, data compression is performed on a per data block basis.” (‘747 patent col. 8 ln. 3-7 (emphasis added).)

Accordingly, the Court should reject Defendants’ attempts to limit the term “data stream” as argued by Defendants, and it should adopt Realtime’s and the Eastern District of Texas’s construction of that term.

C. Data Field Type and Data Block Type

Claim Terms	Defendants’ Construction	Realtime’s Construction
“data field type[s]” “data block type[s]” (“‘568/1; 20; 23; ‘747/14, 19; ‘651/1, 13, 22, 29, 43, 60)	categorization of the data in the field (or block) as one of ASCII, image data, multimedia data, signed and unsigned integers, pointers, or other data type	as attribute or characteristic of the data block or data field

In its opening brief, Realtime explained how its construction of these terms conforms to the language of the claims and is consistent with the understanding of these terms by one of ordinary skill in the art in view of the patent specifications. In addition, Realtime demonstrated why Defendants’ interpretation is wrong. (Realtime Opening Br. at 17-22.) Realtime incorporates those arguments here.

As Realtime noted in its opening brief, Defendants erroneously equate “data block type” and “data field type” with “data type” — a term that does not appear in the claims of either the ‘568 or ‘651 patent. (*See* Shamos Responsive Decl. ¶ 20.) In their opening brief, Defendants reinforce this error by relying on irrelevant goals and objectives of Realtime’s inventions (Def. Opening Br. at 19-20) and referring — yet nowhere explaining — an “inherent relationship” between “data block/field type” and “data type.” (Def. Opening Br. at 16.) *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1327 (Fed. Cir. 2005) (“We have held that the fact that a patent asserts

that an invention achieves several objectives does not require that each of the claims be construed as limited to structures that are capable of achieving all of the objectives.”) (internal quotations and citations omitted). Furthermore, recognizing that their proposed construction seizes on mere exemplary language in the patent specifications regarding “data type,” Defendants now backtrack and focus their arguments only on the first part of their proposed construction:

- “[D]ata block type’ and ‘date field type’ . . . refer to *the categorization of the data type of the block or field.*” (Def. Opening Br. at 16 (emphasis original).)
- “The asserted encoding claims use ‘data block type’ and ‘data field type’ to describe *substantive classifications* for data that are used to determine what kind of encoding to apply to that data.” (*Id.* at 17 (emphasis added).)
- “The data block type *categorizes* the data” (*Id.* at 18 (emphasis added).)
- “Thus, with both the encoding and decoding claims, the ‘data type’ terms represent *a categorization* of the underlying data” (*Id.* (emphasis added).)

Remarkably, Defendants now argue that “[a] ‘data type’ *categorizes data* into known types, defined by the range of possible values that particular data may have, *such as* ASCII, image data, multimedia data, signed and unsigned integers, pointers, etc.” (*Id.* at 16 (emphasis added).) But that proposed construction does nothing to aid the fact finder in applying the claim term to accused infringing products or to the prior art, because it merely lists *examples* of alleged data categories without explaining what constitutes such a category.

Later, Defendants show the true purpose of their argument when the proposed construction changes direction, transforming “such as ASCII, image data . . .” into an absolute limitation: “categorization of the data in the field (or block) *as one of* ASCII, image data,

multimedia data, signed and unsigned integers, pointers, or other data type” (*id.* at 15 (emphasis added)), thereby attempting to limit the “categories” of data to just those “examples” that the patent specification lists. But the listed “examples” are not exhaustive of the data types, data categories, or data characteristics that the inventors intended or that the claims cover — they are merely examples of such characteristics or attributes that can be used to practice the claimed inventions. As Defendants’ own arguments demonstrate, there is no basis for their proposed construction and the Court should reject it.

Even assuming that “data type” is relevant here — which it is not, because it is not a term in the asserted claims — Defendants themselves readily recognize that “ASCII, image data...” etc., are merely exemplary data types:

- “‘ASCII, binary or unicode’ as ‘the three *most common* data types.’” (*Id.* at 16 (quoting ‘747 patent specification) (emphasis added).)
- “[D]ifferent data types (*e.g.*, ASCII, image data, multimedia data, signed and unsigned integers, pointers, etc.).” (*Id.* (quoting ‘568 patent and ‘651 patent) (emphasis original).)
- “[D]efining the term ‘data type’ as ‘*often [including]* types such as real, integer, floating point, character, Boolean and pointer.” (*Id.* (quoting Microsoft Press, *Computer Dictionary* (3d ed. 1997)) (emphasis added).)
- “The specifications of the patents-in-suit guide the definition of the ‘data type’ terms by listing specific, *exemplary data types* - all of which are general categorizations for data” (*Id.* at 18 (emphasis added).)

- “When describing a prior art method, the ‘747 patent lists ‘ASCII, binary or unicode’ as ‘the *three most common* data types’” (*Id.* at 19 (quoting the ‘747 patent) (emphasis added).)
- “The set of possible values defines each of these exemplary ‘data types,’ and, in turn, the *variety of exemplary data types* defines the ‘data type’ terms.” (*Id.* (emphasis added).)

As Defendants’ own statements demonstrate, there is no basis for Defendants’ proposed construction or attempts to equate “data block type” to “data type” and further limiting “data type” to only the examples identified in the patent specifications. Indeed, Realtime agrees with Defendants that “‘data (block or field) type’ is different from the structure and format of the data.” (*Id.* at 20.)

Furthermore, it is of no moment that Defendants include “or other data type” at the end of their proposed construction. While Defendants argue that this language is meant “not to limit the construction to specific examples of the specification” (*id.* at 16) such catch-all language amounts to no construction at all or, worse, would only confuse the jury. Defendants should not be permitted to cleverly argue to the Court that they are not seeking to limit the terms to specific examples in the specifications and later tell a jury that the terms are so limited or seek to sow confusion.

In arguing that the Court should reject Realtime’s construction, Defendants attempt to present a parade-of-horribles. “Realtime’s construction, if adopted, would transform virtually any aspect of data into a ‘type,’ regardless of whether those aspects can be used for the selection of an encoder.” (*Id.* at 20.) Defendants are wrong. As set forth in Realtime’s opening brief, Realtime’s construction is consistent with the claim language, the specifications, and the

understanding of one of ordinary skill in the art. Moreover, the claims themselves make clear that the data block (or field) type is used to select one or more encoders. For example, claim 14 of the '747 patent recites: "selecting one or more lossless encoders based on the data block type and a computer file." Therefore, contrary to Defendants' histrionics, the context of the claims makes clear that "data block type" must be used for the selection of an encoder. Applying Realtime's construction maintains the connection between "data block type" and the selection of an encoder and, indeed, clarifies it: "selecting one more lossless encoders based on [an attribute or characteristic of the data residing in the data block] and a computer file." ('747 patent claim 14 col. 27 ln. 52-53.)

Lastly, it is also of no consequence that the *Packeteer* Court rejected Realtime's proposed construction of "data type." First, although it permeates throughout Defendants' argument, "data type" is not a term in any of the asserted claims, let alone a term that this Court is being asked to construe. Second, in rejecting Realtime's proposed construction for "data type," the *Packeteer* Court simply found that the term did not require construction.

D. Encoder and Decoder

Claim Terms	Defendants' Construction	Realtime's Construction
"encoder[s]" and "encode/ed/ing" ("568/1;15, 20, 23, 31, 32; '747/1, 8, 14, 19; '651/1, 4, 12, 13, 19, 21, 22, 29, 37, 38, 43, 45, 49, 51, 60, 67, 72, 91, 92, 93, 94, 108, 115, 117, 123)	Encoder: hardware or software that compresses data by converting the contents of a data block (or data field) into a coded representation of those contents Encode/ed/ing: compress/ed/ing by converting the contents of a data block (or data field) into a coded representation of those contents.	hardware or software that performs data compression

<p>“decoder[s]” and “decode/ed/ing”</p> <p>‘747/1, 8, 14, 19; ‘651/1, 4, 12, 13, 19, 21, 22, 29, 3</p>	<p>Decoder: hardware or software that decompresses data by reconstructing encoded data</p> <p>Decode/ed/ing: decompress/ed/ing by reconstructing encoded data</p>	<p>hardware or software that performs decompression</p>
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The patents-in-suit teach that “the present invention may be implemented in various forms of hardware, software, firmware, or a combination thereof.” (‘651 patent col. 8 ln. 15-17; ‘747 patent col. 6 ln. 19-21.) Furthermore, “[t]he various processes and functions described herein may be either part of the hardware, microinstruction code or application programs [*i.e.*, software] that are executed via the operating system, or any combination thereof.” (‘651 patent col. 8 ln. 24-28; *see* ‘747 patent col. 6 ln. 32-34.)

In addition, throughout the patents-in-suit, the term “encoder” is used broadly as a synonym for “compressor.” (*See, e.g.*, ‘651 patent col. 14 ln. 11 (“each encoder compresses”), col. 22 ln. 47 (“compression encoders”); ‘747 patent col. 4 ln. 14 (“encoder compression”), col. 4, ln. 59 (“encoders applying a plurality of compression techniques”); col. 3 ln. 17-18 (“[t]he data compressor selects a data compression method”).) (Shamos Responsive Decl. ¶ 23.) Indeed, Defendants themselves use compression and encoding interchangeably when describing Realtime’s inventions: “[T]he alleged invention selects an appropriate encoder by first ‘[analyzing] the incoming data stream to recognize . . . parameters that may be indicative of either the data type/content of a given data block or the appropriate data compression algorithm or algorithms . . . to be applied.’” (Def. Opening Br. at 12 (quoting ‘747 patent col. 16 ln. 12-18).) Thus, Realtime’s construction for “encoder,” as well as the *Packeteer* Court’s construction for the same term appearing in related patents, is consistent with the claim language and the disclosure of the patents-in-suit.

Defendants' incorporation of the extraneous limitation "by converting the contents of a data block (or data field) into a coded representation of those contents" is nothing but a litigation-inspired attempt to avoid infringement. As Defendants state: "The question presented here is whether Realtime has claimed all types of compression or just compression that is achieved through encoding (replacing a value with a smaller representation or code as opposed to just dropping data)." (Def. Opening Br. at 22.) Turning to their familiar flawed playbook, Defendants manufacture a "converting" limitation out of a single exemplary embodiment in the '651 patent (Def. Opening Br. at 23 (citing '651 patent col. 10 ln. 34-38)) and conclude that all of the claimed encoders constitute "a process that creates a new representation of the original data" (*id.*). Indeed, other than this single embodiment, the word "converting" or "conversion" does not appear in any relevant section of the patent specifications, let alone in any of the citations relied upon by Defendants.

Recognizing that their proposed construction, including inapposite technical dictionary definitions and Realtime's discovery request definition, might not suffice to avoid liability, Defendants go even further, stating that "if the compression process merely indicates that the new value of a data field is the same as its previous value without providing a new 'representation' of that data, there is no 'conversion' of the original unencoded data into its encoded form." (Def. Opening Br. at 22-23.) This is a blatant attempt to exclude FAST "copy encoding" from the scope of the claims, and is without basis in the plain language of the claims or the specifications.

Because substantial amounts of financial data constitute duplicative information, the infringing FAST standard employs what is known in the art as "copy encoding." As its name implies, copy encoding is a process by which the compression system recognizes that a current

value appearing in a data field is the same as its previous value in a preceding data field and therefore drops or replaces the “new” value with a zero-length data string (sometimes referred to as the “null value” or “null set”), thereby indicating that the data field is the same as its previous value. (Shamos Responsive Decl. ¶ 25.) Copy encoding is one of the most efficient forms of compression because it completely removes the “new” data field value and transmits a null value. (*Id.*) On the decode or decompression side, a “copy decoder” recognizes that the null value is an indication that the data field value is the same as its previous value and, accordingly, reconstructs the uncompressed original data by simply inserting that previous value. (Shamos Responsive Decl. ¶ 25.)

Copy encoding is clearly encoding and is clearly within the scope of the claims. (*See* Shamos Responsive Decl. ¶¶ 25-26.) Contrary to Defendants’ assertion, a code can be a zero-length string, and indicating that a value has not changed is “encoding.” As understood by one of ordinary skill in the art, the indication (by the presence of the null value or null set) that a given data field is the same as its previous value, is itself the encoding or coded representation. It is also clear that the data field has been encoded because the resulting compressed field (zero-length string) is different from the original data field, yet the original uncompressed data can be reconstructed from it. (Shamos Responsive Decl. ¶ 25.) Indeed, the patents expressly teach that “data null suppression,” which is a form of copy encoding, is an “encoding technique[.]” (*See, e.g.,* ‘747 patent col. 7 ln. 1-7, col. 12 ln. 47-51; ‘651 patent col. 15 ln. 26-31.) (Shamos Responsive Decl. ¶ 26.)

Defendants’ argument that the scope of “encoder” is somehow limited by statements made by the Examiner during reexamination of U.S. Patent No. 7,400,274 — in rejecting *Defendants’* invalidity arguments — is wholly without merit. In support of this argument,

Defendants cite *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973 (Fed. Cir. 1999) for the proposition that “the examiner’s statements unrebutted by the patentee can be relied upon to decipher the scope of the claims.” (Def. Br. at 23.) That is not what *Elkay* stands for, and the facts of that case are irrelevant here. In *Elkay*, the Court found that the patentee had disavowed claim scope by its *own* arguments to successfully overcome rejections based on prior art. Based on those arguments, the Examiner issued a Statement of Reasons for Allowance that limited the scope of the claims and that remained unrebutted by patentee. *Elkay*, 192 F.3d at 979. Here, the Examiner’s statements — which in any event are irrelevant as explained below — were made in response to *Defendants’* arguments. In addition, notwithstanding Defendants’ reliance on *Elkay*, more recent Federal Circuit decisions have made clear that a patentee is not obligated to respond to an Examiner’s statements, and the patentee’s decision to not respond does not result in disavowal of claim scope. *See, e.g., Salazar v. Procter & Gamble Co.*, 414 F.3d 1342, 1345 (Fed. Cir. 2005) (“[A]n applicant’s silence regarding statements made by the examiner during prosecution, without more, cannot amount to a clear and unmistakable disavowal of claim scope. . . . After all, the applicant has disavowed nothing.”) (internal quotations and citations omitted). Moreover, as understood by one of ordinary skill in the art, the Examiner statements cited by Defendants by no means suggest that techniques that do not convert original data or express the data in another form are excluded from Realtime’s inventions. (Shamos Responsive Decl. ¶¶ 28-30.)

Regarding the claim term “decoder,” Realtime agrees with Defendants “that decoding is the flipside of encoding.” (Def. Opening Br. at 24.) Thus, Realtime’s construction logically is “hardware of software that performs decompression.” Defendants’ construction is erroneous

because it injects the term “encoded data” and, as discussed above, Defendants’ construction for “encoder” is wrong.

Accordingly, the Court should reject Defendants’ attempt to twist the plain language of the claims and accept Realtime’s constructions for “encoder” and “decoder.”

E. Lossless

Claim Terms	Defendants’ Construction	Realtime’s Construction
“lossless” and “lossless encode(s)/decoder(s)” (“’747/1, 8, 14, 19; ‘651/1, 13, 19, 22, 29, 43, 49, 60, 91, 97, 108, 114, 115, 121)	technique, software, or hardware that fully preserves the original unencoded data such that the decoded data is identical to the original unencoded data	technique, software, or hardware that provides an exact representation of the original uncompressed data

Defendants argue that “Realtime intends, through the ‘exact *representation*’ language in its proposed construction, to argue that the decoded data need only *represent* the original uncompressed data, not that the original uncompressed and decoded decompressed data need to be identical.” (Def. Opening Br. at 25-26 (emphasis in original).) Defendants misunderstand Realtime’s position. In distinguishing lossy compression from lossless compression, the ‘747 patent explains, “[l]ossy data compression techniques provide for an *inexact representation* of the original uncompressed data such that the decoded (or reconstructed) data differs from the original unencoded/uncompressed data.” (‘747 patent col. 1 ln. 59-62 (emphasis added).) Realtime agrees that “lossy” compression is not covered by the relevant claims, and does not intend to argue to this Court or to the jury that any compression or decompression that provides for an inexact representation of the original uncompressed data is lossless compression or decompression.

Contrary to Defendants' arguments, Realtime is not "run[ning] from" the definition of "lossless" or "lossy" set forth in the patent specification. (Def. Opening Br. at 26.) Rather, Realtime's construction is meant to simplify the term "lossless" and enlighten the jury by providing a clear contrast to the specification's immediately preceding definition of "lossy" compression — *i.e.*, a technique that provides for an "inexact representation of the original uncompressed data." ('747 patent col. 1 ln. 59-62.) In the very next paragraph, "lossless" compression is defined as a compression technique that provides for "an exact representation of the original uncompressed data." (*Id.* col. 2 ln. 6-8.) The specification goes on to say, "Simply stated, the decoded (or reconstructed) data is identical to the original unencoded/uncompressed data." (*Id.* col. 2 ln. 8-9.) While Realtime's construction does not include the cumulative "[s]imply stated" language of the specification's description of "lossless," because such language is unnecessary, Defendants ignore the "exact representation" language, which provides sharper contrast to the patent's description of "lossy" compression and, thus, provides a better construction. (*Id.*)

Defendants not only ignore the more relevant portion of the patent's definition for "lossless," they also improperly import an additional limitation from a preferred embodiment. Specifically, Defendants' proposed construction for "lossless [encoders]" improperly requires that original unencoded data be "fully preserved," whereas the relevant portion of the specification teaches only that "all information is *preferably* fully preserved. As such, lossless data compression is *preferably* applied." ('651 patent col. 7 ln. 22-24 (emphasis added).) See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) ("[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments. . . . That is not just because section 112 of the Patent

Act requires that the claims themselves set forth the limits of the patent grant, but also because persons of ordinary skill in the art rarely would confine their definitions of terms to the exact representations depicted in the embodiments.”). The concept of lossless compression requires only that the encoder and associated decoder be able to recreate an exact representation of the uncompressed data upon decompression. That “exact representation” (which is part of Realtime’s proposed construction for this claim term) might or might not constitute “fully preserving” all of the original data, as explained below. (*See* Shamos Responsive Decl. ¶ 31.)

Defendants’ proposed construction appears to be a litigation-inspired attempt to avoid liability. By injecting the additional “fully preserves” and “the decoded data is identical to the original unencoded data” limitations, Defendants appear poised to argue that for this claim limitation to be met, there must be *complete identity* between the original unencoded data at the source of transmission and the data as used on the receiving end of the transmission. This argument reflects either a conceptual misunderstanding of basic compression terminology or an attempt to confuse the jury.

As understood by a person of ordinary skill in the art, “lossless” is a property of the encoder or decoder; however, it does not characterize the underlying data. Specifically, an encoder or decoder is said to be lossless when it provides an exact representation of the original data, regardless of whether the data *as used* at the receiving end constitutes an identical copy of the original data. In other words, lossless refers to the ability of the decoder to reconstruct the uncompressed data from the compressed data without any loss of data. Although a lossless decoder may or may not be utilized to reconstruct the entirety of the uncompressed data, it is always able to do so. By contrast, a lossy decoder is never able to reconstruct the entirety of the

uncompressed data because it is designed to purposefully lose data (*e.g.*, imperceptible visual or audio data) during the compression and decompression process.

For example, a person of ordinary skill in the art would understand that zip is a lossless compression/decompression technique. In one instance, a zip encoder can compress 10 files into a zip archive. A user of the zip archive, however, may decide to use the zip decoder to decompress only two out of the ten files from the zip archive. In this case, while the decompressed 2-file data is not identical to the original uncompressed 10-file data, there is no question that the zip decoder is lossless because the decompressed 2-file data is in fact identical to the corresponding original 2-file data. If required by the user, the zip decoder can decompress all ten files to create an output that is identical to the original uncompressed 10-file data, but it need not do so. The fact that the zip decoder was not used to reconstruct all ten files does not make it lossy; the process of reconstructing two of the ten files is referred to as lossless. By contrast, a “lossy” compression/decompression technique used on the same two files would result in the intentional loss of some data and, therefore, the two decompressed files would not be identical to the original two files. Nothing in the patents-in-suit or in Realtime’s construction modifies the term “lossless” as understood by a person of ordinary skill in the art. (Shamos Responsive Decl. ¶ 32.) Thus, Defendants should not be permitted to advance a tortured interpretation of “lossless” that focuses on how the data is ultimately used at the receiving end of the transmission.

Accordingly, the Court should reject Defendants’ proposed construction and adopt Realtime’s definition.

F. Descriptor that Indicates or Identifies

Claim Terms	Defendants' Construction	Realtime's Construction
“descriptor with the encoded data which identifies” “descriptors indicate” “descriptor indicates” (‘568/1;’747/1, 8, 14, 19; ‘651/1, 13, 22, 29, 43, 60,91, 108, 115)	recognizable data that is appended to the encoded data for specifying	data token with the encoded data which identifies data tokens indicate data token indicates

Instead of beginning with the plain language of the claims as required by Federal Circuit authority, *see In re NTP, Inc.*, 654 F.3d 1279, 1288 (Fed. Cir. 2011) (“As with any claim construction analysis, we begin with the claim language.”), Defendants begin and focus their entire attention on preferred embodiments in the patents to support their wholesale manufacture and injection of an “appended to the encoded data” limitation into the asserted claims. Nothing in the claims requires the descriptor to be attached or appended to the data block. All that is required is that the descriptor be in the data stream. (*See, e.g.*, ‘651 patent claim 108 col. 33 ln. 5-7 (“an input interface that receives an encoded data packet from the financial data stream having one or more descriptors”).) (Shamos Responsive Decl. ¶ 34.)

Defendants contend that the only systems and methods disclosed in the patents-in-suit include a descriptor that is “attached to the encoded data and transmitted with the encoded data.” (Def. Opening Br. at 27.) Not only do Defendants improperly limit their analysis to preferred embodiments, they also misrepresent what those embodiments disclose. Specifically, in each of those embodiments, the patents teach that a descriptor is preferably appended to the data block — not to the data itself. (*See, e.g.*, ‘747 patent col. 7 ln. 62-65 (“A description module **60** [Fig. 2], operatively coupled to the compression ratio module **50**, appends a corresponding

compression type descriptor to each encoded data block which is selected for output so as to indicate the type of compression format of the encoded data block.”).)

While relying on the patent specifications to improperly inject claim limitations from preferred embodiments into the asserted claims, Defendants completely ignore an express definition of the term “descriptor” in the specification: “A data compression type descriptor *is defined* as any recognizable data token that indicates which data encoding technique has been applied to the data.” (‘651 patent col. 16 ln. 23-26 (emphasis added); *see also* ‘747 patent col. 8 ln. 41-47).) *See Martek Biosciences Corp. v. Nutrinova, Inc.*, 579 F.3d 1363, 1380 (Fed. Cir. 2009) (“When a patentee explicitly defines a claim term in the patent specification, the patentee’s definition controls.”). Notably, Realtime’s express definition of “descriptor” in the specification does not mention “appending” a descriptor to the data block. This fact alone belies Defendants’ assertion that “[n]one of the patents-in-suit disclose a system or method in which the descriptor is not attached to and transmitted with the encoded data.” (Def. Opening Br. at 28 (emphasis in original).)

In addition, Defendants’ complaint about “Realtime’s failure to explain in its construction the terms ‘identify’ and ‘indicate’” is nothing but a red herring. (Def. Opening Br. at 27.) There is simply no reason to construe those terms, as they are readily understood. *See Phillips*, 415 F.3d at 1314 (“In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.”).

In speculating that Realtime intends to argue that a descriptor “only must impart information that might, if combined with other information, allow an inference about the

encoding technique” (Def. Opening Br. at 29), Defendants implicitly attempt to further limit the “descriptor” term. Realtime intends to present an infringement theory in which — as the plain language of the claim requires — the descriptors (*i.e.*, data tokens) “indicate lossless encoders used to compress data blocks associated with the data packet.” (*See, e.g.*, ‘747 patent claim 1 col. 26 ln. 26-28.) There is no basis in the plain language of the claims or the specifications to narrow the scope of these claims.

In fact, nothing in Defendants’ citations to the patent specifications supports any deviation from the plain language of the claims or the injection of additional limitations. (*See, e.g.*, ‘747 patent col. 24 ln. 40-43 (“A data compression type descriptor is defined as any recognizable data token or descriptor that indicates which data encoding technique has been applied to the data.”).) Defendants deviate from the plain language of the claims by implying that the descriptor must “specify *the* encoding technique” (Def. Opening Br. at 29 (emphasis added)), even though the claims clearly state that the descriptor need not “specify” one and only one encoding technique, but rather “indicate[] the selected *one or more* lossless encoders.” (*See, e.g.*, 651 patent claim 13 col. 25 ln. 16-17; ‘747 patent claim 1 col. 26 ln. 26-27 (“descriptors indicate lossless encoders”).) This point is also confirmed by the patent specification: “The data compression type descriptor may possess values corresponding to null (no encoding applied), a single applied encoding technique, *or multiple encoding techniques* applied in a specific or random order (in accordance with the data compression system embodiments and methods discussed above).” (‘651 patent col. 17 ln. 23-28.)

Therefore, there is no basis for Defendants’ proposed construction, and the Court should adopt Realtime’s interpretation for the “descriptor” terms.

G. Content Independent Data Compression

Claim Terms	Defendants' Construction	Realtime's Construction
"content independent data compression" (747/1, 8, 14, 19; '651/1, 22, 29, 60)	applying a plurality of different encoders to input data that is not compressed with content dependent data compression, and selectively combining compressed data blocks output from the encoders based on compression ratios obtained by the encoders	compression that is applied using one or more encoders without regard to the encoder's (or encoders') ability to effectively encode the data block type (<i>or</i> data field type)

Defendants yet again improperly focus on perceived or contrived "purposes" of Realtime's invention ("provide optimal compression even when the type of data to be compressed is indeterminable") and contend — without support, because none exists — that "[f]or this purpose, the patents disclose simultaneously encoding the data with a plurality of different encoders and then selecting the encoder that performs best, *i.e.*, the encoder having the best compression ratio." (Def. Opening Br. at 29.) In fact, the portion of the '747 patent cited on page 29 of their brief nowhere mentions "content independent data compression," let alone any of the text quoted in their brief or any support whatsoever for their proposed construction. Nonetheless, Defendants argue that content independent data compression requires applying a "plurality of encoders . . . based on compression ratios obtained by the encoders." Defendants are wrong.

Although the patents disclose an embodiment in which multiple encoders are applied and compression ratios are compared, Realtime's inventions — and specifically the asserted claims — in no way are limited to only such implementations. On the contrary, the '747 patent specification teaches an embodiment of a content independent data compression system where "[d]ata compression is performed by the encoder module 30 wherein each of the encoders E1 . . . En [Fig. 2] processes a given input data block and outputs a corresponding set of encoded data

blocks.” (‘747 patent col. 7 ln. 16-19). Notably, the very next sentence of the specification states: “It is to be appreciated that the system affords a user the option to enable/disable any one or more of the encoders E1 . . . En prior to operation.” (*Id.* col. 7 ln. 19-22.) Therefore, the specification places no limits on a user’s ability to disable encoders and, in systems with multiple encoders, the user may choose to use only one of “E1 . . . En” encoders. (Shamos Responsive Decl. ¶ 40.)

In addition, the use of multiple encoders to derive a specified compression ratio is specifically claimed in other claims of the patent-in-suit and related patents. For example, unasserted claim 71 of the ‘651 patent (which depends on asserted claim 60) recites: “The system of claim 60, wherein the system for encoding one or more messages to create an encoded data packet in a financial data stream achieves a compression ratio of at least 10:1.” As another example, claim 30 of U.S. Patent No. 7,161,506 (the “‘506 patent”), which is related to the ‘747 patent, recites “said content dependent data compression further comprises providing a first compressed data block from the one of a plurality of encoders, associated to said identified data type, that has the highest compression ratio for said data block.” (Ex. 4, ‘506 patent claim 30.) This absence in the asserted claims of specifically recited features — “compression ratios obtained by the encoders” — in other claims establishes that the asserted claims are not properly limited to including the non-recited features that Defendants improperly seek to inject. *See Phillips*, 415 F.3d at 1314 (“Differences among claims can also be a useful guide in understanding the meaning of particular claim terms.”).

Defendants’ citation to the ‘747 patent’s “Summary of the Invention” on page 30 of their brief is unavailing because it does not even mention the term “content independent data compression.” Further, Defendants’ reliance on the prosecution history of an earlier patent in the

chain that led to the ‘747 patent is equally unfounded. (Def. Opening Br. at 33.) The claim at issue in the prior patent prosecution recited in relevant part: “compressing the input data stream using each of a plurality of different encoders” and “generating an encoded data stream by selectively combining compressed data blocks output from each of the encoders based on compression ratios obtained by the encoders.” (Ex. 5, U.S. Patent No. 6,309,424 claim 8.) As explained above, none of the asserted claims here involve the concept of “compression ratios.” Therefore, contrary to Defendants’ arguments, in overcoming prior art, Realtime said nothing about “content independent data compression,” let alone limited the scope of that term.

Remarkably, Defendants’ recitation of a purported “very definition of CIDC” in the ‘651 patent is belied by the very quote in their brief that follows this rash assertion: “A content-independent data compression method *generally* comprises the steps of” (Def. Opening Br. at 30 (citing ‘651 patent col. 14 ln. 4-34) (emphasis added).) Likewise, Defendants boldly state that “comparing the compression results of multiple encoders is the essence of CIDC.” (*Id.*) Yet the very portion of the patent specification that they cite states: “Consequently, by processing the input data blocks with a plurality of encoding techniques and comparing the compressing results, content free data compression is *advantageously* achieved.” (‘747 patent col. 9 ln. 12-15.) However, “general” statements about content independent data compression do not indicate that the Realtime inventors acted as their own lexicographers in defining that term, and disclosures about “advantages” of Realtime’s inventions do not capture the “essence” of its asserted patent claims. (Shamos Responsive Decl. ¶ 41.)

Defendants’ insistence that CIDC and CDDC are “mutually exclusive of each other” is equally without merit. Defendants provide no support in the patents-in-suit — because none exists — for their statement that “the systems in the specifications and claims employ CIDC *only*

when CDDC is not used.” (Def. Opening Br. at 31 (emphasis original).) As one of ordinary skill in the art would readily recognize, nothing in the patent specifications or plain language of the asserted claims excludes compressing a particular data block utilizing both content dependent data compression and content independent data compression. (Shamos Responsive Decl. ¶ 43.)

As Defendants correctly state, “the claims plainly state that ‘if the data block is recognized’ then CDDC is used and ‘if the data block type is not recognized’ then CIDC is used.” (Def. Opening Br. at 32 (quoting ‘747 patent claims 14 and 19).) Defendants’ erroneous logic, however, equates the conditional “if” statement in the claims to “only if.” This is improper, and the Court should reject Defendants’ argument.

Although Defendants quote certain arguments made by Realtime and its expert during claim construction briefing in the *Packeteer* litigation, they fail to tell the Court that the *Packeteer* Court rejected Realtime’s proposed construction (as well as the construction advanced by the defendants in that case) and adopted its own construction for CIDC and CDDC. Therefore, the only relevant conclusion from the proceedings in the *Packeteer* litigation that Defendants can reasonably rely upon is that there will be only one construction of the compression terms and that the proper interpretations of those terms are the constructions handed down by the *Packeteer* Court.

Realtime’s proposed construction properly captures the difference between content independent data compression and content dependent data compression as disclosed in the patents. As the specification repeatedly teaches, “content independent data compression is applied to a data block when the content of the data block cannot be identified or is not associable with a specific data compression algorithm.” (See, e.g., ‘747 patent col. 15 ln. 57-60,

col. 20 ln. 42-45.) In contrast, content dependent data compression is applied “if the data type of the data block is identified.” (*See, e.g.*, ‘747 patent col. 3 ln. 53-54, col. 4 ln. 46-47.)

The patent teaches that in one aspect of the invention, the incoming data stream is analyzed to recognize certain parameters that may be indicative of the data type or content, as well as the appropriate data compression algorithm or algorithms. (‘747 patent col. 16 ln. 12-21.) Then, “[e]ach data block that is recognized by the content data compression module **1300** [Figs. 13a, 13b] is routed to a content dependent encoder module **1320**, if not the data is routed to the content independent encoder module **30**.” (*Id.* col. 16 ln. 21-24.) In another aspect, “the step of performing content independent data compression comprises: encoding the data block with a plurality of encoders to provide a plurality of encoded data blocks.” (‘747 patent col. 3 ln. 57-60.) In contrast, “the step of performing content dependent compression comprises the steps of: selecting one or more encoders *associated with the identified data type* and encoding the data block with the selected encoders to provide a plurality of encoded data blocks.” (*Id.* col. 4 ln. 4-9 (emphasis added).)

The asserted claims also distinguish between content dependent data compression “if the data block type is recognized as associated with a lossless encoder utilizing content dependent data compression” and content independent data compression “if the data block type is not recognized as associated with a lossless encoder utilizing content dependent data compression.” (*See, e.g.*, ‘651 patent claim 22 col. 25 ln. 61 - col. 26 ln. 3.)

Thus, as demonstrated by the patent specification and the claims, and as understood by one of ordinary skill in the art, if the content of the data block cannot be identified (that is, there is no data block type associated with it), then the choice of encoder cannot depend on the content of the data block and is therefore “content independent.” On the other hand, content dependent

data compression means that the method used to perform compression is dependent on the nature of the content of the data. (Shamos Responsive Decl. ¶ 44.)

Tellingly, in construing the same CIDC and CDDC terms, the *Packeteer* Court relied on the same teachings in a related patent that shares the same specification as the ‘747 patent and concluded that:

These sections of the specification indicate that content dependent data compression is applied to identified data types based on the encoder’s ability to effectively compress the data type, while content independent data compression is applied to data types that are not identified in order to attempt to achieve efficient compression despite the fact that the resulting compression ratio is neither certain, nor foreseeable.

(Realtime Opening Br. Ex. EE, *Realtime Data, LLC d/b/a IXO v. Packeteer, Inc., et al.*, Case No. 6:08cv144 (E.D. Tex.), Memorandum Opinion and Order at 32 (June 22, 2009)). There is no reason to now depart from the *Packeteer* Court’s reasoned analysis.

Accordingly, the Court should reject Defendants’ proposed construction and adopt Realtime’s definition.

H. Content Dependent Data Compression

Claim Terms	Defendants’ Construction	Realtime’s Construction
“content dependent data compression” (‘747/1, 8, 14, 19; ‘651/1, 22, 29, 38, 60, 67)	compression that is applied to input data that is not compressed with content independent data compression, the compression using one or more encoders selected based on the encoder’s (or encoders’) ability to effectively encode the data type of the data block	compression that is applied using one or more encoders selected based on the encoder’s (or encoders’) ability to effectively encode the data block type (<i>or</i> data field type)

The only significant difference between Defendants’ and Realtime’s proposed construction is Defendants’ inclusion of the limiting clause “to input data that is not compressed with content independent data compression.” As with the “content independent data

compression” term discussed above, Defendants improperly insist that “CDDC is applied as an alternative to CIDC and that both are not applied to the same data to be compressed.” (Def. Opening Br. at 34.) For the same reasons discussed above in connection with the “content independent data compression” term, it is improper to import this limitation into the asserted claims. Additionally, for the same reasons discussed above in connection with the “data field type” and “data block type” terms, Defendants’ proposed inclusion of the term “data type of the data block” in its proposed construction for CDDC is incorrect. Therefore, the Court should adopt Realtime’s construction.

I. Global State Machine

Claim Terms	Defendants’ Construction	Realtime’s Construction
“global state machine” (‘651/1, 26, 35, 64)	hardware, microinstruction code, or application program whose state transitions are based on prior knowledge of at least the data stream packet structure	hardware, microinstruction code, or application program whose state transitions are based on prior knowledge of a least some aspects of the content or structure of the financial data stream

While Realtime’s position is that its proposed construction is correct, there is no meaningful difference between the parties’ respective interpretations. Therefore, while rejecting the arguments in Defendants’ Opening Brief, Realtime accepts Defendants’ construction for “global state machine.”

J. Determinate Point

Claim Terms	Defendants’ Construction	Realtime’s Construction
“a determinate point of the [encoded] data packet” (‘651/15, 37, 45, 93, 110, 116)	an identifiable sequence of one or more bytes in the data stream	a discernible location in the data packet (<i>or</i> in the encoded data packet)

While Realtime's position is that its proposed construction is correct, there is no meaningful difference between the parties' respective interpretations. Therefore, while rejecting the arguments in Defendants' Opening Brief, Realtime accepts Defendants' construction for "a determinate point of the [encoded] data packet."

K. Content Dependent/Independent Data Decompression

Claim Terms	Defendants' Position	Realtime's Proposed Construction
"content dependent data decompression" (‘747/1, 8; ‘651/1)	The phrase is indefinite under §112.	decompression technique to reverse the compression of data achieved through content dependent data compression
"content independent data decompression" ‘747/1, 8; ‘651/1	The phrase is indefinite under §112.	decompression technique to reverse the compression of data achieved through content dependent data compression

As explained in Realtime's Opening Markman Brief, these terms are clear on their face, and therefore do not require interpretation. (*See* Realtime Opening Br. at 24-27; Shamos Responsive Decl. ¶ 46.) Nevertheless, in response to Defendants' indefiniteness challenge, Realtime provided the above constructions and explained that, as clearly understood by one of ordinary skill in the art, "content dependent data decompression" ("CDDD") and "content independent data decompression" ("CIDD") simply mean decompression techniques to reverse "content dependent data compression" or "content independent data compression," as the case may be. (Shamos Opening Decl. ¶¶ 12-13; Shamos Responsive Decl. ¶ 47.)

As set forth in more detail in Realtime's Opposition to Defendants' Motion for Partial Summary Judgment of Invalidity for Indefiniteness and Lack of Written Description (which is incorporated herein by reference), Defendants cannot meet their heavy burden of proving by

“clear and convincing evidence” that the asserted claims that include the terms “content independent data decompression” and “content dependent data decompression” are indefinite. *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1331 (Fed. Cir. 2010). Indeed, Defendants’ current indefiniteness challenge is wholly inconsistent with their positions during reexamination, where Defendants had no trouble construing these terms for the purpose of applying numerous prior art references and arguing (unsuccessfully) that the asserted claims are invalid as anticipated or obvious. (*See* Realtime Indefiniteness Opp. at 7-9.) Defendants cannot have it both ways. The decompression claims cannot be “both indefinite and anticipated.” *Enzo Biochem*, 599 F.3d at 1332. The fact that Defendants were able to perform invalidity analyses during reexamination, and specifically assert that the CDDD and CIDD claim limitations were met, proves that the claims and the disputed decompression terms have a “discernible construction” and are not indefinite. *See id.* (“A determination that a claim is anticipated involves a two-step analysis: the first is construing the claim, and the second step in the analysis requires a comparison of the properly construed claim to the prior art. . . . Without a discernible claim construction, an anticipation analysis cannot be performed.”).

Moreover, in now arguing that the decompression terms are indefinite, Defendants misleadingly and incorrectly assert that the term CDDD does not appear in the ‘747 or ‘651 patent specification, and that the term CIDD appears in each specification only once. That is false. As explained in Realtime’s opposition to Defendants’ summary judgment motion, both the term CDDD and the term CIDD are used multiple times in the specifications. (*See, e.g.*, ‘747 patent col. 1 ln. 19-22, col. 6 ln. 13-16; ‘651 patent col. 13 ln. 57, col. 14 ln. 39-42, 51; *see also* Realtime Indefiniteness Opp. at 14-15, 20.) Realtime’s proposed constructions of CDDD and CIDD are consistent with the patent specifications’ usage of those terms, as well as the

understanding of one of skill in the art. Realtime's proposed constructions for "content dependent data decompression" and "content independent data decompression" mirror Realtime's proposed constructions for "content dependent data compression" and "content independent data compression." As their prefix "de" signifies, CDDD and CIDD reverse the compression achieved through CDDC and CIDC. (Shamos Responsive Decl. ¶ 47.) Accordingly, the Court should adopt Realtime's constructions of CDDD and CIDD.

III. Conclusion

For the reasons described herein, Realtime respectfully requests that the Court reject Defendants' proposed constructions and adopt Realtime's constructions.

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RESPECTFULLY SUBMITTED,

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CERTIFICATE OF SERVICE

The undersigned certifies that true and correct copies of the foregoing document were served on all counsel of record on April 20, 2012.

/s/ Lauren L. Fornarotto